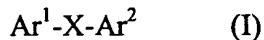


## **WHAT IS CLAIMED IS:**

1           1. A method of treating a CCR4-mediated condition or disease in a  
2 subject, said method comprising administering to a subject in need of such treatment an  
3 effective amount of a compound having the formula:



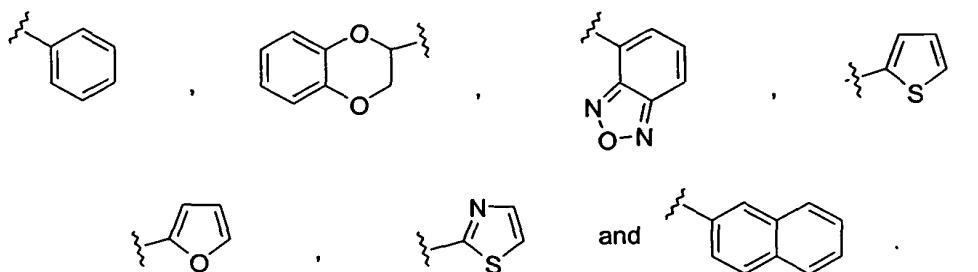
## 5      wherein

Ar<sup>1</sup> and Ar<sup>2</sup> are each members independently selected from the group consisting of substituted or unsubstituted aryl, substituted or unsubstituted fused aryl-heterocyclic ring systems and substituted or unsubstituted heteroaryl; and X is a linking group selected from the group consisting of -N(R)-, -C(O)S-, -CH=CHSO<sub>2</sub>- and -SO<sub>2</sub>N(R)- wherein R is a member selected from the group consisting of H and substituted or unsubstituted (C<sub>1</sub>-C<sub>8</sub>)alkyl.

2. A method in accordance with claim 1, wherein X is  $-\text{NH}-$ .

3. A method in accordance with claim 1, wherein X is  $-\text{SO}_2\text{NH}-$ .

1                   4. A method in accordance with claim 1, wherein Ar<sup>1</sup> and Ar<sup>2</sup> are  
2 each substituted or unsubstituted members independently selected from the group  
3 consisting of:



5. A method in accordance with claim 2, wherein Ar<sup>1</sup> is substituted  
heteroaryl and Ar<sup>2</sup> is substituted or unsubstituted aryl.

1                   6.         A method in accordance with claim 5, wherein said Ar<sup>1</sup> is a  
2 substituted heteroaryl selected from the group consisting of substituted thiazolyl,  
3 substituted thienyl, and substituted furanyl.

1                   **7.**       A method in accordance with claim 5, wherein said Ar<sup>2</sup> is a  
2 substituted or unsubstituted phenyl or a substituted or unsubstituted naphthyl.

1                   **8.**       A method in accordance with claim 3, wherein Ar<sup>2</sup> is a phenyl  
2 group having from 1 to 4 substituents independently selected from the group consisting of  
3 halogen, hydroxy, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, (C<sub>1</sub>-C<sub>4</sub>)alkylthio, (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, (C<sub>1</sub>-  
4 C<sub>4</sub>)haloalkoxy, nitro, cyano, (C<sub>1</sub>-C<sub>4</sub>)acyl, amino, (C<sub>1</sub>-C<sub>4</sub>)alkylamino, and di(C<sub>1</sub>-  
5 C<sub>4</sub>)alkylamino.

1                   **9.**       A method in accordance with claim 8, wherein said phenyl group  
2 has from 1 to 3 substituents independently selected from the group consisting of halogen,  
3 (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, (C<sub>1</sub>-C<sub>4</sub>)haloalkoxy, nitro, cyano, and (C<sub>1</sub>-C<sub>4</sub>)acyl.

1                   **10.**      A method in accordance with claim 3, wherein Ar<sup>1</sup> is a substituted  
2 or unsubstituted monocyclic or bicyclic heterocycle.

1                   **11.**      A method in accordance with claim 10, wherein said heterocycle is  
2 selected from the group consisting of pyrrolyl, pyrazolyl, imidazolyl, pyrazinyl, oxazolyl,  
3 isoxazolyl, thiazolyl, furyl, thienyl, pyridyl, pyrimidyl, benzothiazolyl, benzoxadiazolyl,  
4 purinyl, benzimidazolyl, indolyl, isoquinolyl, quinoxalinyl and quinolyl.

1                   **12.**      A method in accordance with claim 11, wherein said heterocycle is  
2 selected from the group consisting of thienyl, thiazolyl and benzoxadiazolyl.

1                   **13.**      A method in accordance with claim 1, wherein said CCR4-  
2 mediated condition or disease is selected from the group consisting of contact  
3 hypersensitivity, atopic dermatitis, allergic airway hypersensitivity, allergic rhinitis,  
4 atherosclerosis, septic shock, angina, myocardial infarction, restenosis,  
5 ischemia/reperfusion injury, multiple sclerosis, rheumatoid arthritis, type I diabetes,  
6 psoriasis, cancer and HIV infection.

1                   **14.**      A method in accordance with claim 1, wherein said CCR4-  
2 mediated condition or disease is psoriasis, contact hypersensitivity or atopic dermatitis.

1                   **15.**      A method in accordance with claim 14, wherein said CCR4-  
2 mediated condition or disease is psoriasis.

1                   **16.**       A method in accordance with claim 14, wherein said CCR4-  
2 mediated condition or disease is contact hypersensitivity.

1                   **17.**       A method in accordance with claim 14, wherein said CCR4-  
2 mediated condition or disease is atopic dermatitis.

1                   **18.**       A method in accordance with claim 1, wherein said CCR4-  
2 mediated condition or disease is a disease of the airway.

1                   **19.**       A method in accordance with claim 18, wherein said disease of the  
2 airway is selected from the group consisting of allergic asthma and allergic rhinitis.

1                   **20.**       A method in accordance with claim 18, wherein said disease of the  
2 airway is allergic asthma.

1                   **21.**       A method in accordance with claim 1, wherein said CCR4-  
2 mediated condition or disease is a disease of innate immunity.

1                   **22.**       A method in accordance with claim 21, wherein said disease of  
2 innate immunity is septic shock.

1                   **23.**       A method in accordance with claim 1, wherein said CCR4-  
2 mediated condition or disease is atherosclerosis.

1                   **24.**       A method in accordance with claim 1, wherein said CCR4-  
2 mediated condition or disease is a disease or condition characterized by platelet  
3 aggregation or thrombosis.

1                   **25.**       A method in accordance with claim 24, wherein said CCR4-  
2 mediated disease or condition is selected from the group consisting of angina, myocardial  
3 infarction, restenosis, stroke and ischemia/reperfusion injury.

1                   **26.**       A method in accordance with claim 1, wherein said CCR4-  
2 mediated condition or disease is an allergic condition and said compound is used alone or  
3 in combination with at least one therapeutic agent wherein said therapeutic agent is an  
4 antihistamine.

1                   **27.**     A method in accordance with claim 1, wherein said CCR4-  
2 mediated disease or condition is psoriasis and said compound is used alone or in  
3 combination with at least one therapeutic agent selected from a corticosteroid, a lubricant,  
4 a keratolytic agent, a vitamin D<sub>3</sub> derivative, PUVA, or anthralin.

1                   **28.**     A method in accordance with claim 1, wherein said CCR4-  
2 mediated disease or condition is atopic dermatitis and said compound is used alone or in  
3 combination with at least one therapeutic agent selected from a lubricant and  
4 corticosteroid.

1                   **29.**     A method in accordance with claim 1, wherein said CCR4-  
2 mediated condition or disease is asthma and said compound is used alone or in  
3 combination with at least one therapeutic agent selected from a β2-agonist and a  
4 corticosteroid.

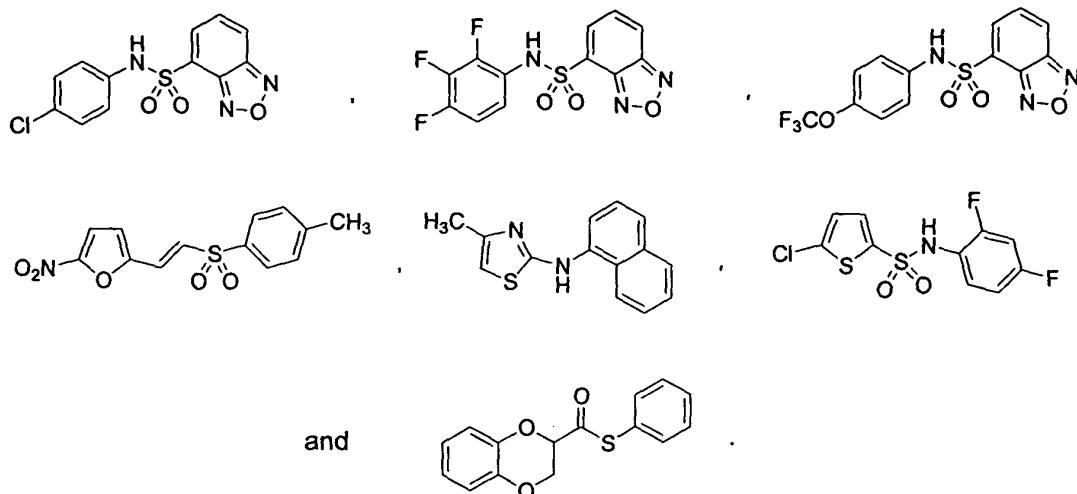
1                   **30.**     A method in accordance with claim 1, wherein said compound  
2 interferes with the interaction between CCR4 and a ligand.

1                   **31.**     A method in accordance with claim 1, wherein said administration  
2 is oral or intravenous.

1                   **32.**     A method in accordance with claim 1, wherein said subject is  
2 selected from the group consisting of human, rat, dog, cow, horse, and mouse.

1                   **33.**     A method in accordance with claim 1, wherein said subject is  
2 human.

1                   **34.**     A method in accordance with claim 1, wherein said compound is  
2 selected from the group consisting of

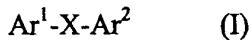


3

1           35. A method in accordance with claim 1, wherein said CCR4-  
 2 mediated disease or condition is selected from the group consisting of multiple sclerosis,  
 3 rheumatoid arthritis, type I diabetes, psoriasis, cancer and HIV infection; Ar<sup>1</sup> is a  
 4 substituted heterocycle; X is -SO<sub>2</sub>NH-; and Ar<sup>2</sup> is a substituted phenyl.

1           36. A method in accordance with claim 1, wherein said CCR4-  
 2 mediated disease or condition is selected from the group consisting of multiple sclerosis,  
 3 rheumatoid arthritis, type I diabetes, psoriasis, cancer and HIV infection; Ar<sup>1</sup> is a  
 4 substituted heterocycle; X is -NH-; and Ar<sup>2</sup> is naphthyl.

1           37. A pharmaceutical composition for the treatment of a CCR4-  
 2 mediated disease or condition, said composition comprising a pharmaceutically  
 3 acceptable carrier and an effective amount of a compound which inhibits the binding of  
 4 MDC or TARC to CCR4, said compound having the formula:

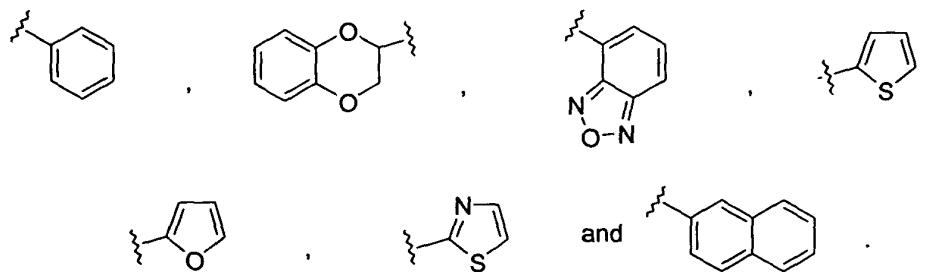


5           Ar<sup>1</sup> and Ar<sup>2</sup> are each members independently selected from the group consisting  
 6           of substituted or unsubstituted aryl, substituted or unsubstituted fused aryl-  
 7           heterocyclic ring systems and substituted or unsubstituted heteroaryl; and  
 8           X is a linking group selected from the group consisting of -N(R)-, -C(O)S-,  
 9           -CH=CHSO<sub>2</sub>- and -SO<sub>2</sub>N(R)- wherein R is a member selected from the  
 10          group consisting of H and substituted or unsubstituted (C<sub>1</sub>-C<sub>8</sub>)alkyl.

1           38. A composition of claim 37, wherein X is -NH-.

1           39. A composition of claim 37, wherein X is -SO<sub>2</sub>NH-.

1                  40.        A composition of claim 37, wherein Ar<sup>1</sup> and Ar<sup>2</sup> are each  
2       substituted or unsubstituted members independently selected from the group consisting  
3       of:



1                  41.        A composition of claim 37, wherein Ar<sup>1</sup> is substituted heteroaryl  
2       and Ar<sup>2</sup> is substituted or unsubstituted aryl.

1                  42.        A composition of claim 41, wherein said Ar<sup>1</sup> is a substituted  
2       heteroaryl selected from the group consisting of substituted thiazolyl, substituted thienyl,  
3       and substituted furanyl.

1                  43.        A composition of claim 41, wherein said Ar<sup>2</sup> is a substituted or  
2       unsubstituted phenyl or a substituted or unsubstituted naphthyl.

1                  44.        A composition of claim 41, wherein Ar<sup>2</sup> is a phenyl group having  
2       from 1 to 4 substituents independently selected from the group consisting of halogen,  
3       hydroxy, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, (C<sub>1</sub>-C<sub>4</sub>)alkylthio, (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, (C<sub>1</sub>-  
4       C<sub>4</sub>)haloalkoxy, nitro, cyano, (C<sub>1</sub>-C<sub>4</sub>)acyl, amino, (C<sub>1</sub>-C<sub>4</sub>)alkylamino, and di(C<sub>1</sub>-  
5       C<sub>4</sub>)alkylamino.

1                  45.        A composition of claim 44, wherein said phenyl group has from 1  
2       to 3 substituents independently selected from the group consisting of halogen, (C<sub>1</sub>-  
3       C<sub>4</sub>)haloalkyl, (C<sub>1</sub>-C<sub>4</sub>)haloalkoxy, nitro, cyano, and (C<sub>1</sub>-C<sub>4</sub>)acyl.

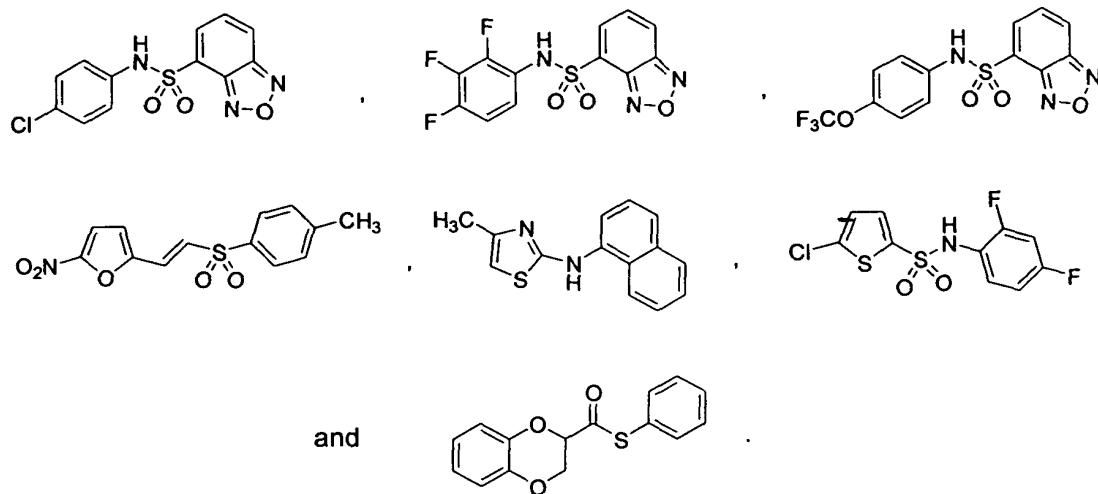
1                  46.        A composition of claim 37, wherein Ar<sup>1</sup> is a substituted or  
2       unsubstituted monocyclic or bicyclic heterocycle.

1                  47.        A composition of claim 46, wherein said heterocycle is selected  
2       from the group consisting of pyrrolyl, pyrazolyl, imidazolyl, pyrazinyl, oxazolyl,

3 isoxazolyl, thiazolyl, furyl, thienyl, pyridyl, pyrimidyl, benzothiazolyl, benzoxadiazolyl,  
4 purinyl, benzimidazolyl, indolyl, isoquinolyl, quinoxalinyl and quinolyl.

1           **48.**    A composition of claim 47, wherein said heterocycle is selected  
2 from the group consisting of thienyl, thiazolyl and benzoxadiazolyl.

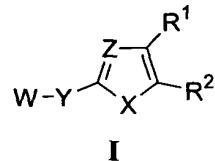
1           **49.**    A composition of claim 37, wherein said compound is selected  
2 from the group consisting of



1           **50.**    A method for modulating CCR4 function in a cell, comprising  
2 contacting said cell with a CCR4-modulating amount of a composition of claim 37.

1           **51.**    A method for modulating CCR4 function, in which said cell is  
2 contacted with a CCR4 protein with a therapeutically effective amount of the composition  
3 of claim 37.

1           **52.**    A compound of formula (I):



4 or a pharmaceutically acceptable salt thereof, wherein

5           W is selected from aryl, heteroaryl, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, cycloalkyl and  
6           heterocycloalkyl;

7           X is selected from N(R<sup>5</sup>), S, O, C(R<sup>3</sup>)=C(R<sup>4</sup>), N=C(R<sup>4</sup>) and, optionally, when Z is  
8           N, X can be C(R<sup>6</sup>)(R<sup>7</sup>);

9           Y is selected from a bond, N(R<sup>5</sup>), N(R<sup>5</sup>)-(C<sub>1</sub>-C<sub>8</sub>)alkylene, O, S and S(O)<sub>n</sub>, wherein  
10          the integer n is 1 or 2;  
11          Z is selected from N and C(R<sup>8</sup>);  
12          R<sup>1</sup> and R<sup>2</sup> are independently selected from H, halogen, CN, CO<sub>2</sub>R', CONR'R'',  
13           (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl, heteroaryl, N(R<sup>6</sup>)(R<sup>7</sup>), OR<sup>9</sup> and optionally,  
14          R<sup>1</sup> and R<sup>2</sup> combine to form a 5- to 8-membered ring containing from 0 to 3  
15          heteroatoms selected from N, O and S, wherein R' and R'' are  
16          independently selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl, and when R' and R''  
17          are attached to nitrogen atom, they may be combined with the nitrogen  
18          atom to form a 5-, 6-, or 7-membered ring;  
19          R<sup>3</sup>, R<sup>4</sup> and R<sup>8</sup> are independently selected from H, halogen, CN, OH, (C<sub>1</sub>-C<sub>8</sub>)alkyl,  
20           heteroalkyl, aryl, heteroaryl, O(C<sub>1</sub>-C<sub>8</sub>)alkyl, N(R<sup>6</sup>)(R<sup>7</sup>) and OR<sup>9</sup>;  
21          R<sup>5</sup> is selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl and heteroaryl;  
22          R<sup>6</sup> and R<sup>7</sup> are independently selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl and  
23          heteroaryl; and  
24          R<sup>9</sup> is selected from (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl and haloalkyl;  
25          with the provisos that R<sup>2</sup> is other than H when W is unsubstituted phenyl, X is S,  
26          Y is NH, Z is N and R<sup>1</sup> is (C<sub>1</sub>-C<sub>8</sub>)alkyl; and R<sup>1</sup> is other than phenyl, when W is phenyl or  
27          unsubstituted naphthyl, X is S, Y is NH, and Z is N.

1           **53.**       A compound of claim 52, wherein Z is N.

1           **54.**       A compound of claim 52, wherein X is S.

1           **55.**       A compound of claim 52, wherein Y is N(R<sup>5</sup>).

1           **56.**       A compound of claim 52, wherein Z is N, X is S and Y is N(R<sup>5</sup>).

1           **57.**       A compound of claim 52, wherein W is aryl or heteroaryl.

1           **58.**       A compound of claim 57, wherein W is substituted or unsubstituted  
2          phenyl or naphthyl.

1           **59.**       A compound of claim 57, wherein W is substituted or unsubstituted  
2          pyridyl or quinolyl.

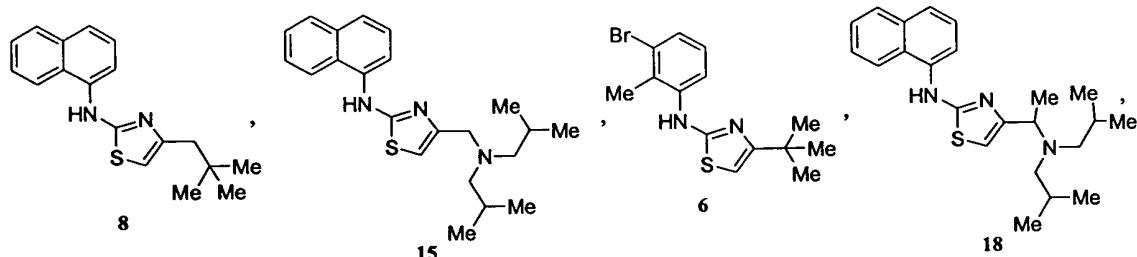
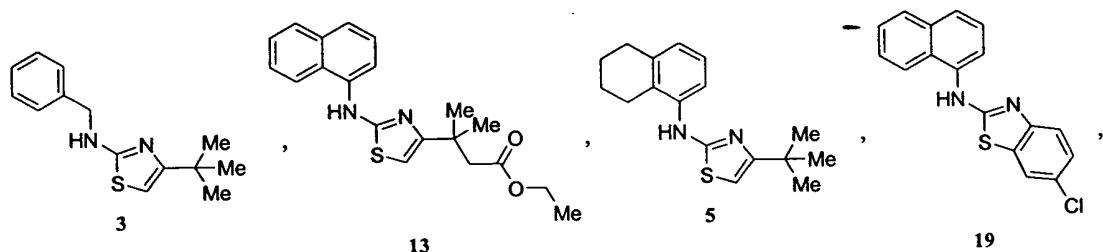
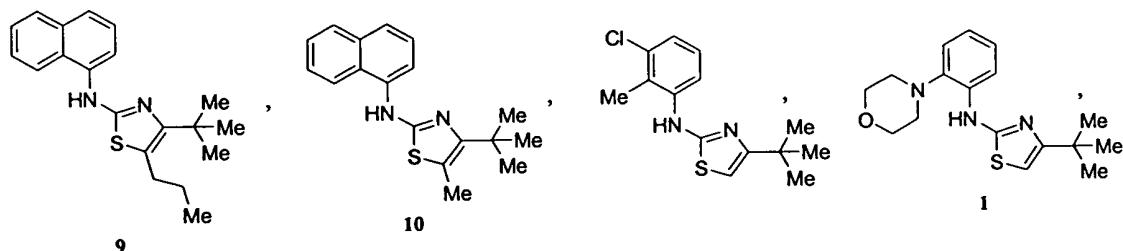
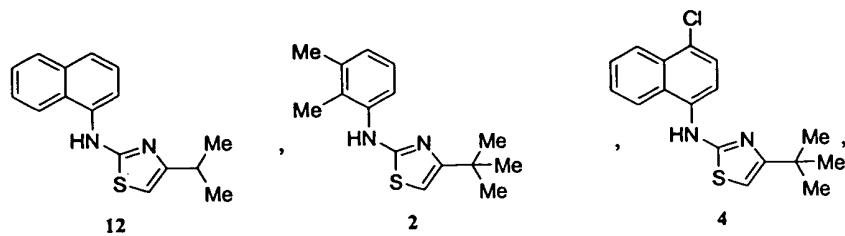
1                   **60.**       A compound of claim **52**, wherein R<sup>1</sup> and R<sup>2</sup> are each  
2 independently selected from H and (C<sub>1</sub>-C<sub>8</sub>)alkyl.

1                   **61.**       A compound of claim **52**, wherein R<sup>1</sup> and R<sup>2</sup> are combined to form  
2 a fused 6-membered aryl or heteroaryl ring.

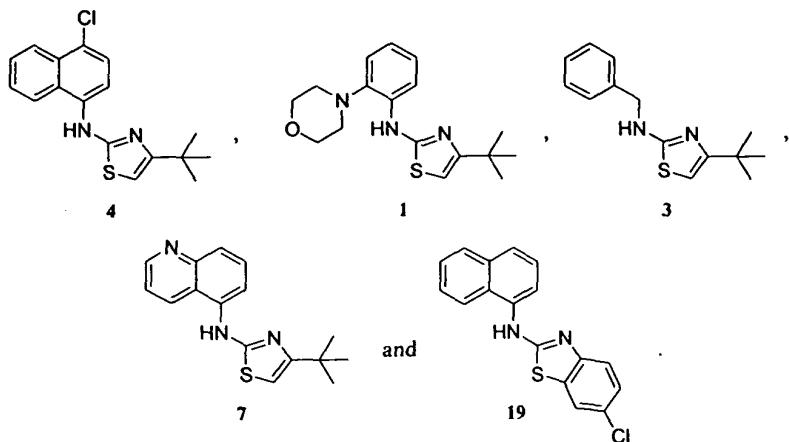
1                   **62.**       A compound of claim **52**, wherein Z is N, X is S, Y is N(R<sup>5</sup>) and  
2 R<sup>1</sup> and R<sup>2</sup> are each independently selected from H and (C<sub>1</sub>-C<sub>8</sub>)alkyl.

1                   **63.**       A compound of claim **52**, wherein Z is N, X is S, Y is N(R<sup>5</sup>) and  
2 R<sup>1</sup> and R<sup>2</sup> are combined to form a fused 6-membered aryl or heteroaryl ring.

1                   **64.**       A compound of claim **52**, said compound being selected from the  
2 group consisting of:



1                   65. A compound of claim 52, said compound being selected from the  
 2 group consisting of:



3

1       **66.** A compound of claim 52, wherein

2       W is selected from substituted phenyl, substituted or unsubstituted naphthyl,

3           pyridyl, quinolyl, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, cycloalkyl and

4           heterocycloalkyl;

5       X is selected from N(R<sup>5</sup>), S, O, C(R<sup>3</sup>)=C(R<sup>4</sup>), N=C(R<sup>4</sup>) and, optionally, when Z is  
6           N, X can be C(R<sup>6</sup>)(R<sup>7</sup>);

7       Y is selected from a bond, N(R<sup>5</sup>), N(R<sup>5</sup>)-(C<sub>1</sub>-C<sub>8</sub>)alkylene, O, S and S(O)<sub>n</sub>, wherein  
8           the integer n is 1 or 2;

9       Z is selected from N and C(R<sup>8</sup>);

10      R<sup>1</sup> and R<sup>2</sup> are independently selected from H, halogen, CN, CO<sub>2</sub>R', CONR'R'',  
11           (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl, heteroaryl, N(R<sup>6</sup>)(R<sup>7</sup>), OR<sup>9</sup> and optionally,  
12           R<sup>1</sup> and R<sup>2</sup> combine to form a 5- to 8-membered ring containing from 0 to 3  
13           heteroatoms selected from N, O and S, wherein R' and R'' are  
14           independently selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl, and when R' and R''  
15           are attached to a nitrogen atom, they may be combined with the nitrogen  
16           atom to form a 5-, 6-, or 7-membered ring;

17      R<sup>3</sup>, R<sup>4</sup> and R<sup>8</sup> are independently selected from H, halogen, CN, OH, (C<sub>1</sub>-C<sub>8</sub>)alkyl,  
18           heteroalkyl, aryl, heteroaryl, O(C<sub>1</sub>-C<sub>8</sub>)alkyl, N(R<sup>6</sup>)(R<sup>7</sup>) and OR<sup>9</sup>;

19      R<sup>5</sup> is selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl and heteroaryl;

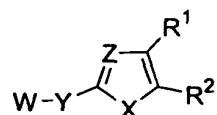
20      R<sup>6</sup> and R<sup>7</sup> are independently selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl and  
21           heteroaryl; and

22      R<sup>9</sup> is selected from (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl and haloalkyl.

1

1       **67.** A compound of claim 66, wherein Z is N.

- 1                   **68.**    A compound of claim 66, wherein X is S.
- 1                   **69.**    A compound of claim 66, wherein Y is N(R<sup>5</sup>).
- 1                   **70.**    A compound of claim 66, wherein Z is N, X is S and Y is N(R<sup>5</sup>).
- 1                   **71.**    A compound of claim 66, wherein W is substituted phenyl or  
2    substituted or unsubstituted naphthyl.
- 1                   **72.**    A compound of claim 66, wherein W is substituted or unsubstituted  
2    pyridyl or substituted or unsubstituted quinolyl.
- 1                   **73.**    A compound of claim 66, wherein R<sup>1</sup> and R<sup>2</sup> are independently  
2    selected from the group consisting of H and (C<sub>1</sub>-C<sub>8</sub>)alkyl.
- 1                   **74.**    A compound of claim 66, wherein R<sup>1</sup> and R<sup>2</sup> are combined to form  
2    a fused 6-membered aryl or heteroaryl ring.
- 1                   **75.**    A compound of claim 66, wherein W is substituted phenyl or  
2    substituted or unsubstituted naphthyl, Z is N, X is S, Y is N(R<sup>5</sup>), and R<sup>1</sup> and R<sup>2</sup> are  
3    independently selected from the group consisting of H and (C<sub>1</sub>-C<sub>8</sub>)alkyl.
- 1                   **76.**    A compound of claim 66, wherein W is substituted phenyl or  
2    substituted or unsubstituted naphthyl, Z is N, X is S, Y is N(R<sup>5</sup>), and R<sup>1</sup> and R<sup>2</sup> are  
3    combined to form a fused 6-membered aryl or heteroaryl ring.
- 1                   **77.**    A compound of claim 66, wherein W is substituted or unsubstituted  
2    pyridyl or substituted or unsubstituted quinolyl, Z is N, X is S, Y is N(R<sup>5</sup>), and R<sup>1</sup> and R<sup>2</sup>  
3    are independently selected from the group consisting of H and (C<sub>1</sub>-C<sub>8</sub>)alkyl.
- 1                   **78.**    A compound of claim 66, wherein W is substituted or unsubstituted  
2    pyridyl or substituted or unsubstituted quinolyl, Z is N, X is S, Y is N(R<sup>5</sup>), and R<sup>1</sup> and R<sup>2</sup>  
3    are combined to form a fused 6-membered aryl or heteroaryl ring.
- 1                   **79.**    A pharmaceutical composition comprising a pharmaceutically  
2    acceptable carrier and a compound of formula (I):



## I

or a pharmaceutically acceptable salt thereof, wherein

W is selected from aryl, heteroaryl, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, cycloalkyl and heterocycloalkyl;

X is selected from N(R<sup>5</sup>), S, O, C(R<sup>3</sup>)=C(R<sup>4</sup>), N=C(R<sup>4</sup>) and, optionally, when Z is N, X can be C(R<sup>6</sup>)(R<sup>7</sup>);

Y is selected from a bond, N(R<sup>5</sup>), N(R<sup>5</sup>)-(C<sub>1</sub>-C<sub>8</sub>)alkylene, O, S and S(O)<sub>n</sub>, wherein the integer n is 1 or 2;

Z is selected from N and C(R<sup>8</sup>);

R<sup>1</sup> and R<sup>2</sup> are independently selected from H, halogen, CN, CO<sub>2</sub>R', CONR'R'', (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl, heteroaryl, N(R<sup>6</sup>)(R<sup>7</sup>), OR<sup>9</sup> and optionally, R<sup>1</sup> and R<sup>2</sup> combine to form a 5- to 8-membered ring containing from 0 to 3 heteroatoms selected from N, O and S, wherein R' and R'' are independently selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl, and when R' and R'' are attached to nitrogen atom, they may be combined with the nitrogen atom to form a 5-, 6-, or 7-membered ring;

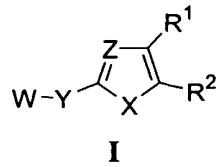
R<sup>3</sup>, R<sup>4</sup> and R<sup>8</sup> are independently selected from H, halogen, CN, OH, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl, heteroaryl, O(C<sub>1</sub>-C<sub>8</sub>)alkyl, N(R<sup>6</sup>)(R<sup>7</sup>) and OR<sup>9</sup>;

R<sup>5</sup> is selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl and heteroaryl;

R<sup>6</sup> and R<sup>7</sup> are independently selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl and heteroaryl; and

R<sup>9</sup> is selected from (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl and haloalkyl.

80. A method for treating a CCR4-mediated condition in a subject, said method comprising administering to a subject in need of such treatment an effective amount of a compound of formula (I):



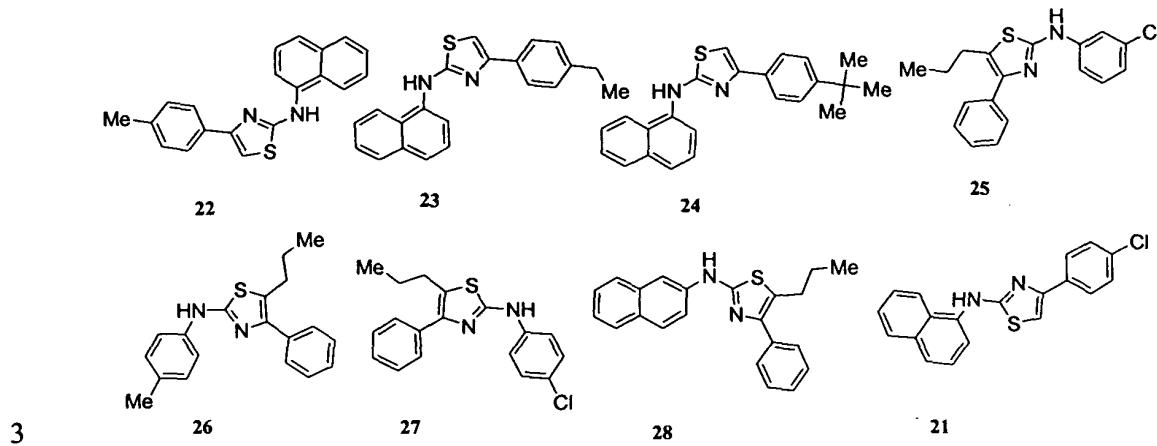
or a pharmaceutically acceptable salt thereof, wherein

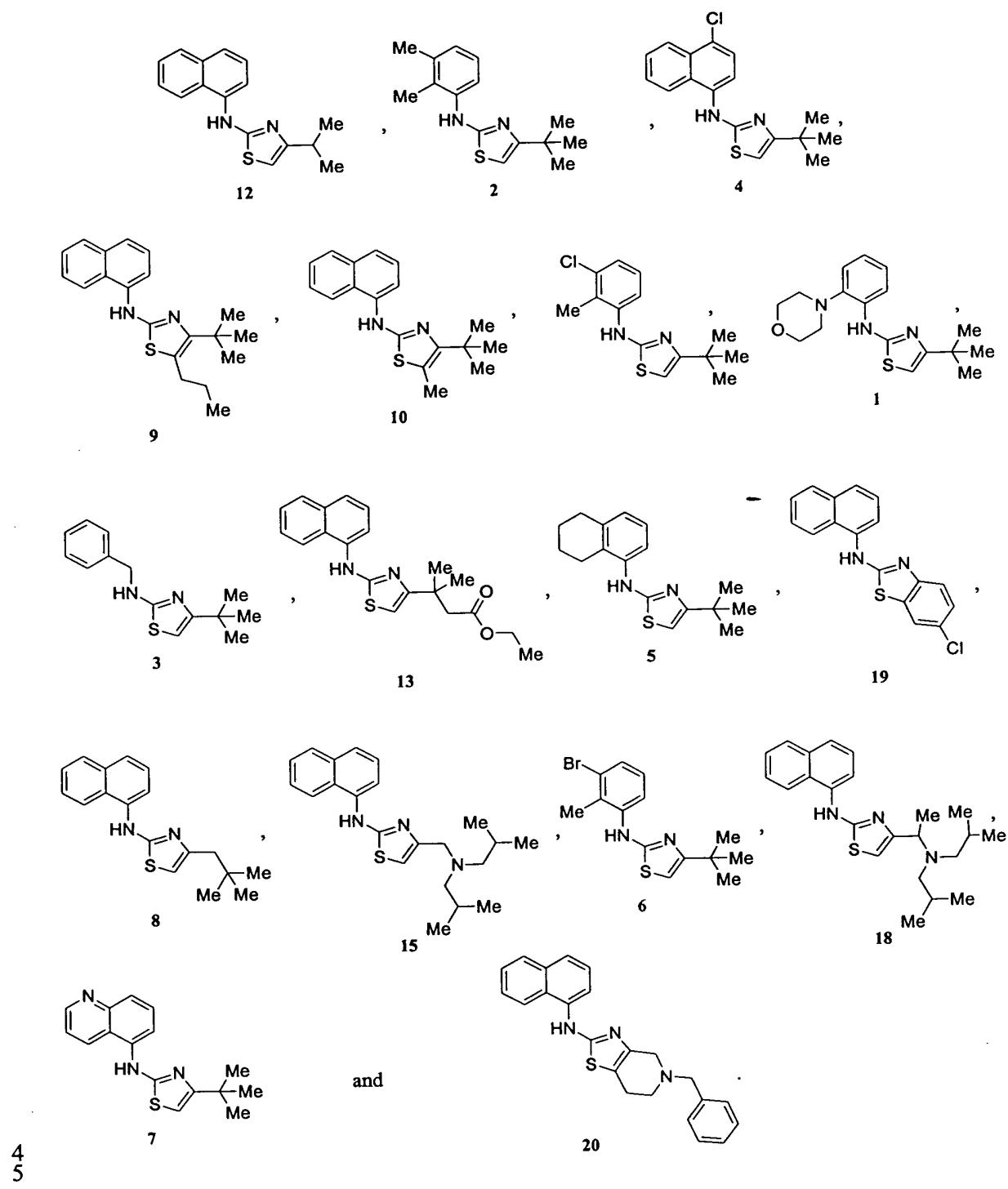
W is selected from aryl, heteroaryl, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, cycloalkyl and heterocycloalkyl;

X is selected from N(R<sup>5</sup>), S, O, C(R<sup>3</sup>)=C(R<sup>4</sup>), N=C(R<sup>4</sup>) and, optionally, when Z is N, X can be C(R<sup>6</sup>)(R<sup>7</sup>);

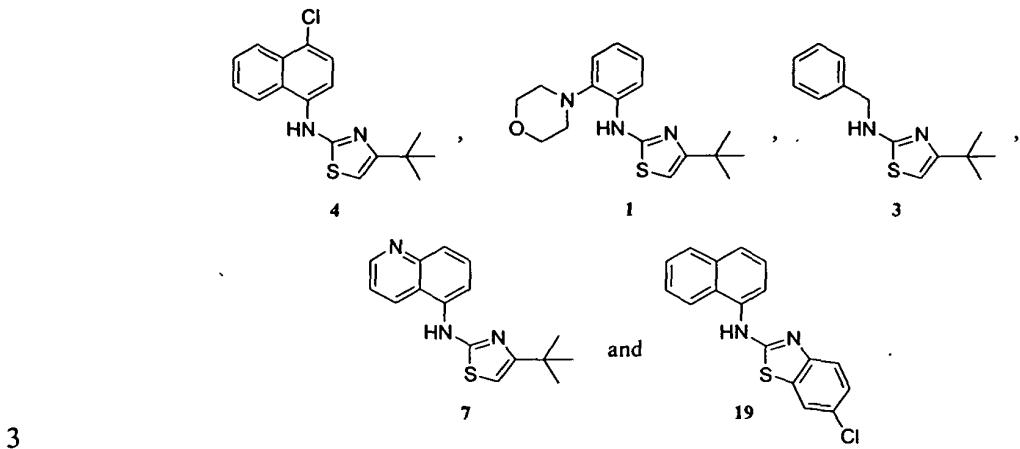
11        Y is selected from a bond, N(R<sup>5</sup>), N(R<sup>5</sup>)-(C<sub>1</sub>-C<sub>8</sub>)alkylene, O, S and S(O)<sub>n</sub>, wherein  
 12        the integer n is 1 or 2;  
 13        Z is selected from N and C(R<sup>8</sup>);  
 14        R<sup>1</sup> and R<sup>2</sup> are independently selected from H, halogen, CN, CO<sub>2</sub>R', CONR'R'',  
 15        (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl, heteroaryl, N(R<sup>6</sup>)(R<sup>7</sup>), OR<sup>9</sup> and optionally,  
 16        R<sup>1</sup> and R<sup>2</sup> combine to form a 5- to 8-membered ring containing from 0 to 3  
 17        heteroatoms selected from N, O and S, wherein R' and R'' are  
 18        independently selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl, and when R' and R''  
 19        are attached to nitrogen atom, they may be combined with the nitrogen  
 20        atom to form a 5-, 6-, or 7-membered ring;  
 21        R<sup>3</sup>, R<sup>4</sup> and R<sup>8</sup> are independently selected from H, halogen, CN, OH, (C<sub>1</sub>-C<sub>8</sub>)alkyl,  
 22        heteroalkyl, aryl, heteroaryl, O(C<sub>1</sub>-C<sub>8</sub>)alkyl, N(R<sup>6</sup>)(R<sup>7</sup>) and OR<sup>9</sup>;  
 23        R<sup>5</sup> is selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl and heteroaryl;  
 24        R<sup>6</sup> and R<sup>7</sup> are independently selected from H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl, aryl and  
 25        heteroaryl; and  
 26        R<sup>9</sup> is selected from (C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroalkyl and haloalkyl.

1            81.        A pharmaceutical composition comprising a pharmaceutically  
 2        acceptable carrier and a compound selected from the group consisting of:

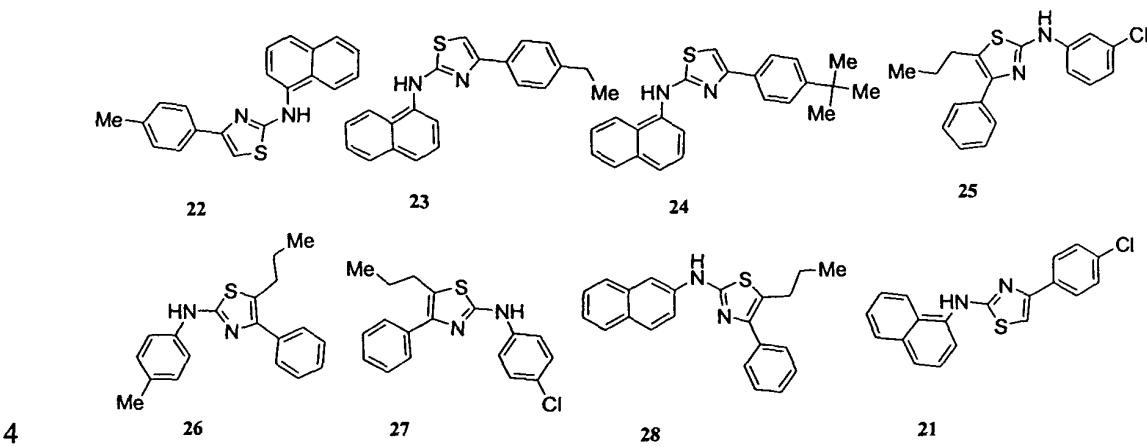


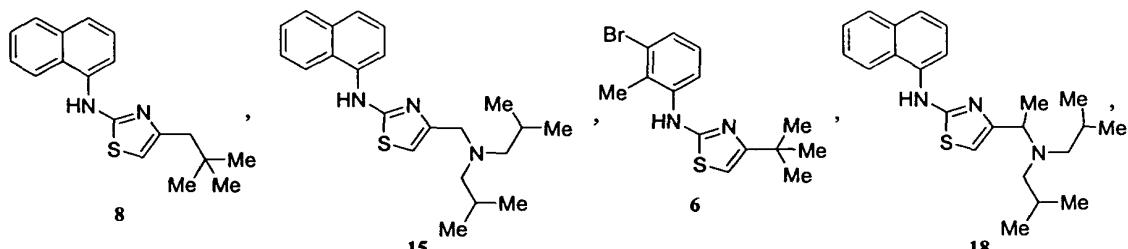
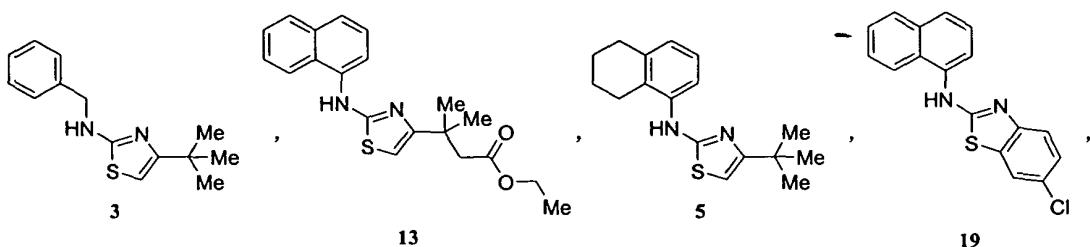
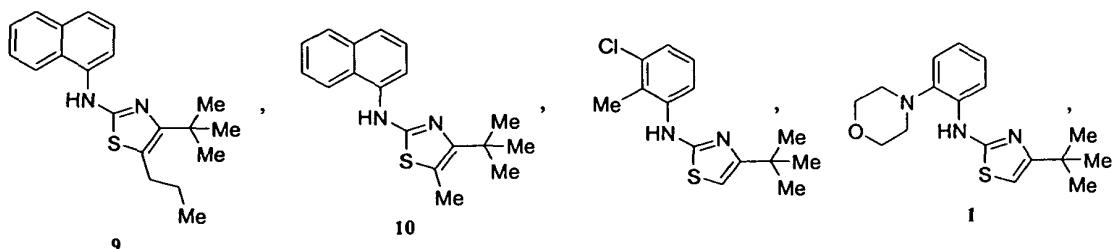
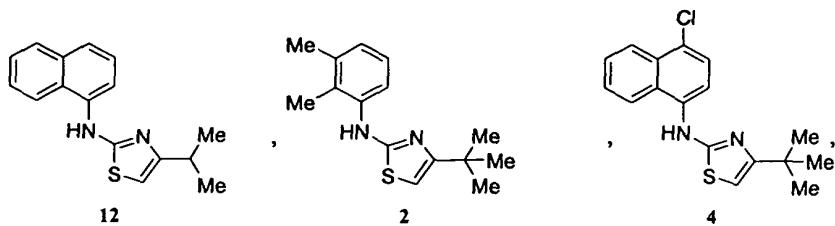


1        82. A pharmaceutical composition of claim 81, wherein said  
 2        compound is selected from the group consisting of:

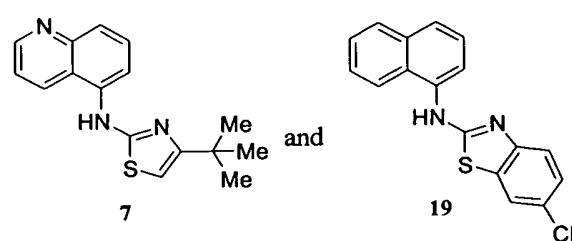
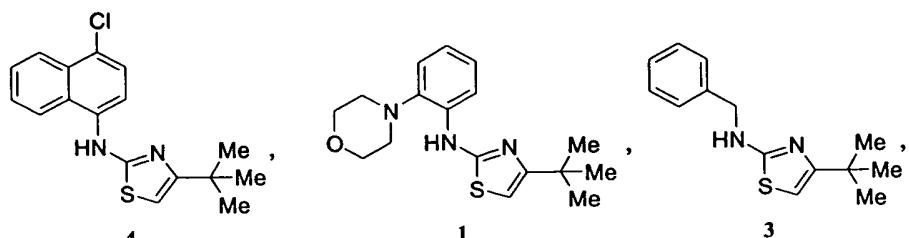


1           83.     A method for treating a CCR4-mediated condition in a subject, said  
2     method comprising administering to a subject in need of such treatment an effective  
3     amount of a compound selected from the group consisting of:





1                    84.         A method in accordance with claim 83, wherein said compound is  
 2       selected from the group consisting of:



3